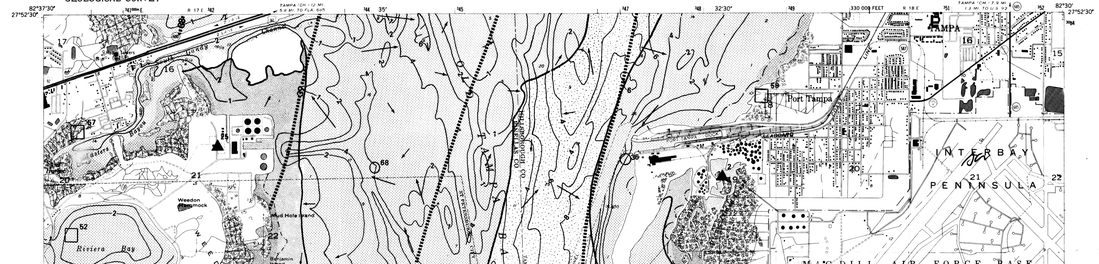
I 49.89/2:85(15)map B11

ORIGINAL

I49.89/2:85(15)map B11

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PORT TAMPA QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)

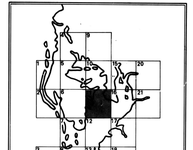


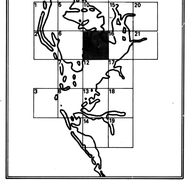
MAP B11

TAMPA BAY ENVIRONMENTAL ATLAS

WATER RESOURCES

PORT TAMPA





Scale 1:24,000

1984

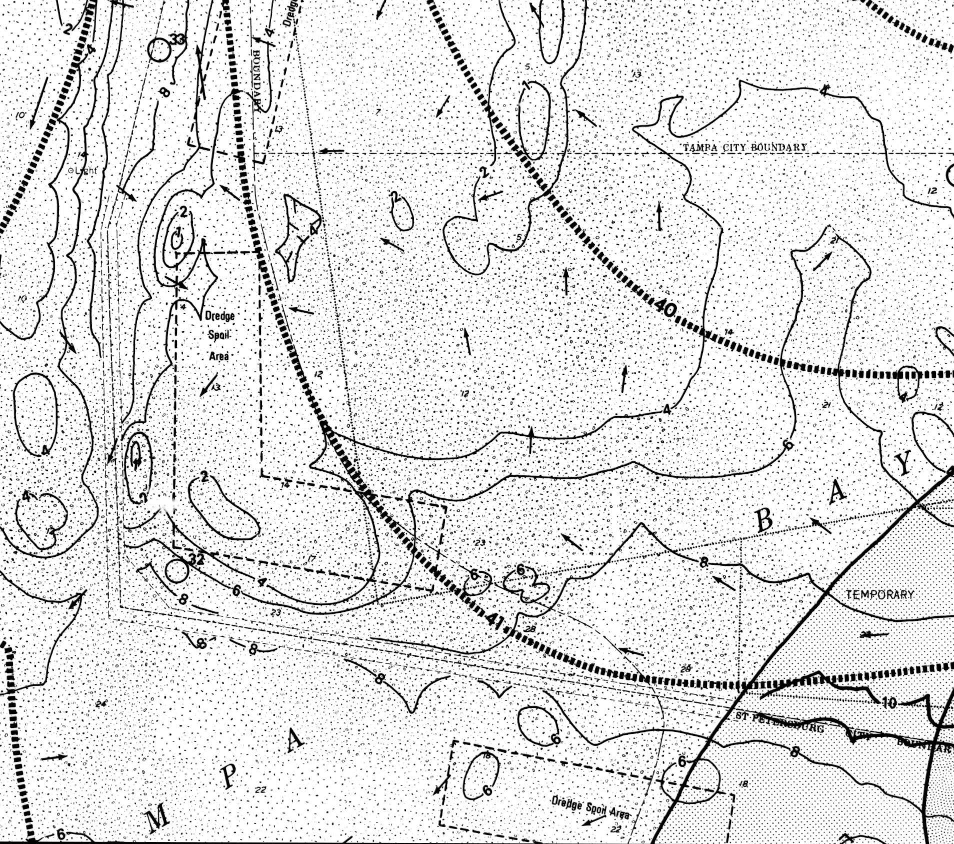
TOPICAL MAPS IN THIS ATLAS:
A. BIOLOGICAL RESOURCES
B. WATER RESOURCES

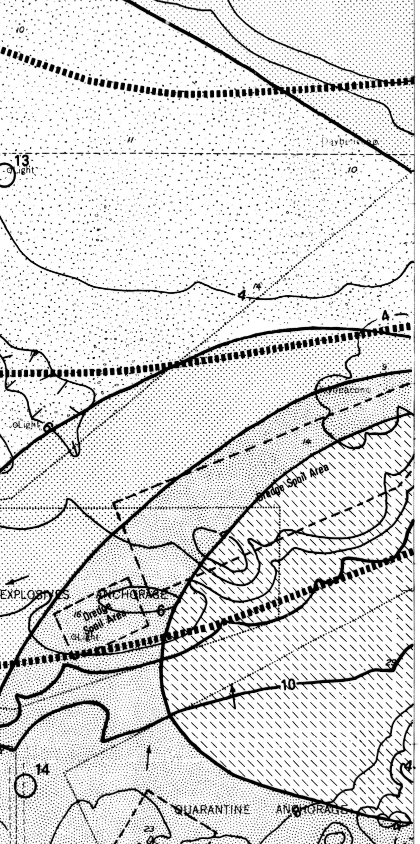
Produced by U.S. Fish and Wildlife Service
Projection and 1,000 meter grid, zone 17, Universal Transverse Mercator
10,000-foot grid ticks based on Florida coordinate system, east and west zones

Overlay material compiled in 1984 from latest available data obtained from Federal, State and Local government agencies and other sources.

There is no map A19 due to a lack of data.

BM 4
T 31 S
41
Shore Acres
3
ST PETERSBURG
4
Butterfly Lake
5
Bayou
Smacks Bayou
8
26
Q = 20.0 MGD
9
Country Club
Snell Isle
Park
Snell Harbor
Coffeepot Bayou
Bay Point
17
Light
Light
Light
4
6
8
10
12
2
1
Piles


Dredge
BOUNDARY
TAMPA CITY BOUNDARY
Light
Dredge
Spoil
Area
40
41
B A Y
TEMPORARY
ST PETERSBURG CITY BOUNDAR
10
M P A
Dredge Spoil Area
33
32
2
4
6
8


10
11
Daybeacon
13
Light
10
4
4
9
Daybeacon
Light
6
14
Dredge Spoil Area
EXPLOSIVES ANCHORAGE
6
16 Dredge Spoil Area
Light
29
10
14
QUARANTINE ANCHORAGE
23

system, east and west zones

Overlay material compiled in 1984 from latest available data obtained from Federal, State and Local government agencies and other sources.

There is no map A19 due to a lack of data.

LEGEND

▮▮▮▮▮35▮▮▮▮▮ **MEAN ANNUAL MID-DEPTH SPECIFIC CONDUCTIVITY ISOPLETH (WATER QUALITY) CONTOUR MAP**

Five year mean annual specific conductivity
September 1978 - August 1983
(mmhos)

POINT SOURCE DISCHARGES *

▲10 Q= ___ Industrial Point Source Discharge. Q is permitted capacity in total gallons per day (tgd) or in millions of gallons per day (mgd).

△10 Q= ___ Municipal Point Source Discharge. Q is permitted capacity in total gallons per day (tgd) or millions of gallons per day (mgd).

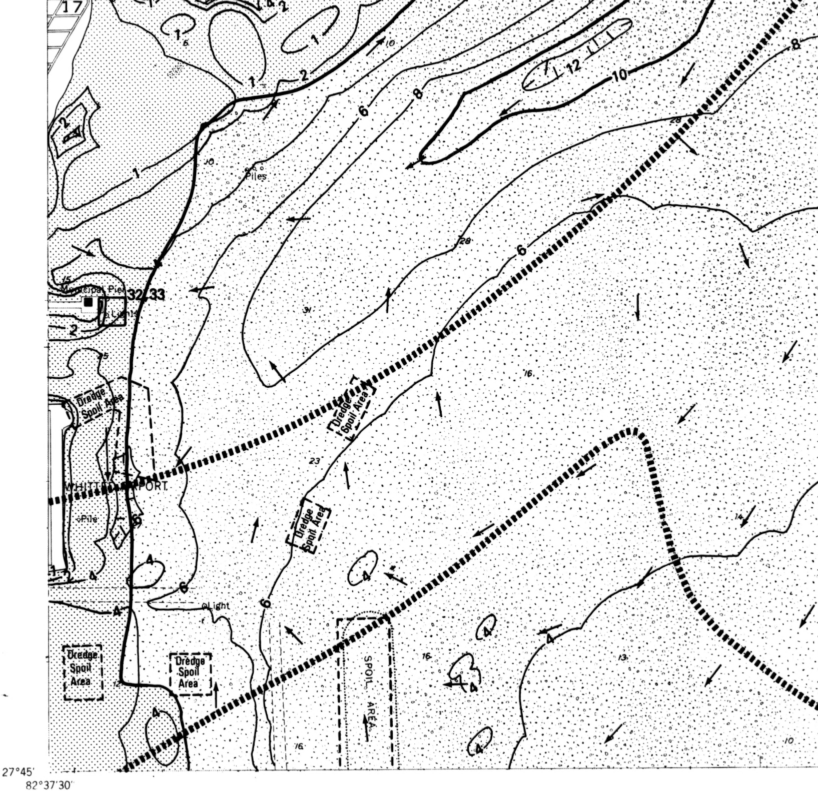
Dredge Spoil Area **DREDGE SPOIL DISPOSAL SITES**

TIDE STATION *
(National Ocean Service)

⊡10 Active tide station. The tide station number is listed next to the symbol.

□10 Inactive tide station location. The tide station number is listed next to the symbol.

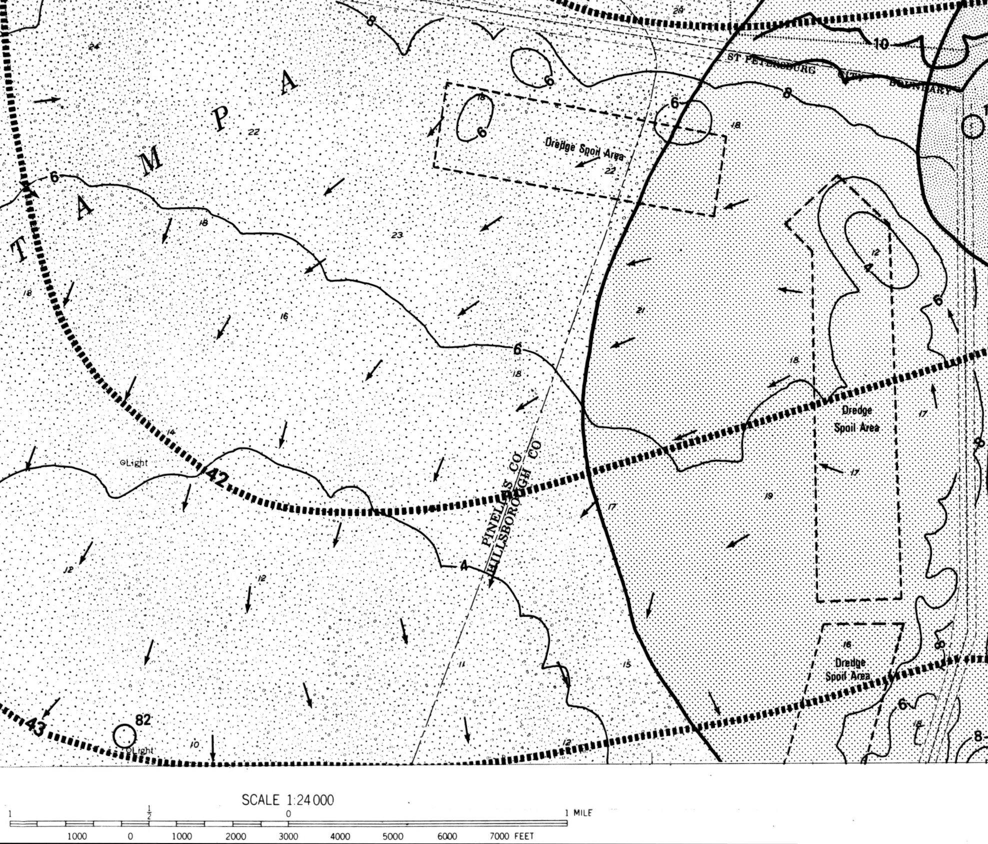
○10 **WATER QUALITY SAMPLING STATION** *
(Hillsborough County Environmental Protection Commission)
Five year seasonal means, Sept. 1978 - Aug. 1983

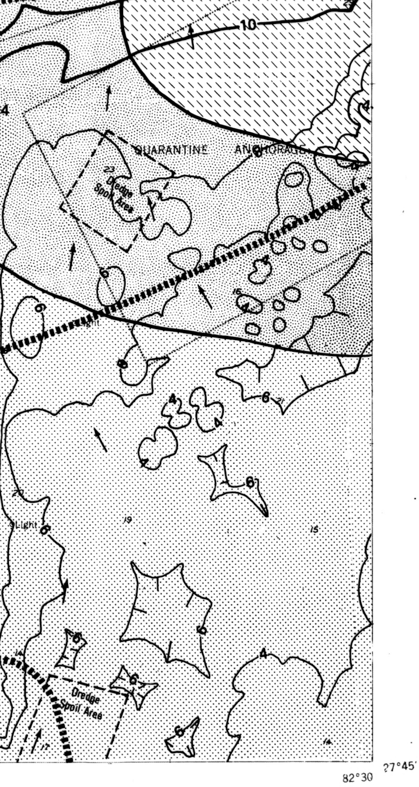


17
1
2
10
12
10
8
6
Piles
28
Municipal Pier
32
33
Lights
31
16
Dredge Spoil Area
23
WHITTED AIRPORT
Pile
15
4
Light
SPOIL AREA
14
13
10
27°45'
82°37'30''

THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND

N.O.S. TIDE STATIONS: Index of tide stations for the state of


T A M P A
Dredge Spoil Area
Dredge Spoil Area
Dredge Spoil Area
ST PETERSBURG CITY BOUNDARY
PINELLAS CO
HILLSBOROUGH CO
Light
Light
42
43
82
6
8
10
4
24
22
23
18
16
14
12
10
11
15
17
19
21
SCALE 1:24 000
1
½
0
1 MILE
1000
0
1000
2000
3000
4000
5000
6000
7000 FEET


QUARANTINE ANCHORAGE
Dredge Spoil Area
Light
Light
Dredge Spoil Area
10
4
6
82°30
27°45'

☼ 10 Active tide station. The tide station number is listed next to the symbol.

□ 10 Inactive tide station location. The tide station number is listed next to the symbol.

○ 10 **WATER QUALITY SAMPLING STATION** *
(Hillsborough County Environmental
Protection Commission)
Five year seasonal means, Sept. 1978 - Aug. 1983

——2—— **BATHYMETRY**

The contour interval is 2.0 meters with an initial 1.0 meter supplemental contour line added to better define shoals and inshore tidal flats.

–·–·–·– **INTERTIDAL ZONE**

This zone demarcates the area exposed and flooded by the tides and occurs between the line and the shore.

GENERALIZED SEDIMENT MAP

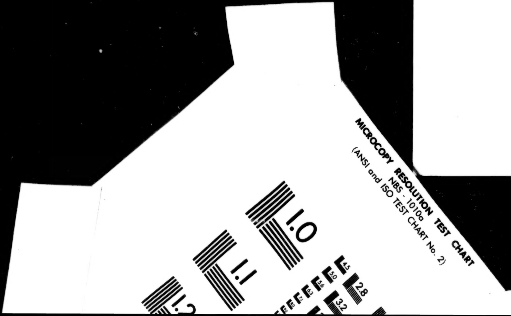
- ░ Sand
- ░ Shelly Sand
- ▒ Silty Sand
- ▓ Clayey Sand
- ▨ Sandy Clay
- ▧ Silt

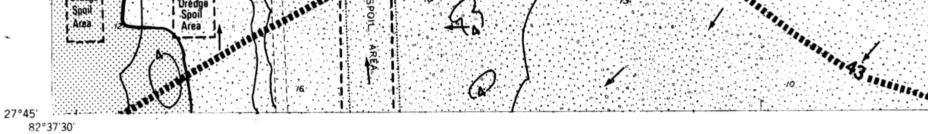
NET TIDAL CURRENT

Resultant tidal current. The direction is indicated by the arrow and the discharge range is feet per second

- → 0.01 - 0.10 ft/sec
- → 0.11 - 0.20 ft/sec
- → 0.21 - 0.30 ft/sec
- → 0.31 - 0.50 ft/sec
- → > 0.50 ft/sec

F/S **FRESHWATER/SALTWATER INTERFACE**
(U.S. Geological Survey 1979)
250 mg/l line of equal chloride
concentration in the upper part
of Floridan aquifer.


MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
(ANSI and ISO TEST CHART No. 2)
1.0
1.1
1.2
4.5
5.0
5.6
6.3
2.8
3.2



THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND WILDLIFE SERVICE, DIVISION OF BIOLOGICAL SERVICES NATIONAL COASTAL ECOSYSTEMS TEAM (FWS/OBS) FOR COASTAL PLANNERS, DECISION MAKERS AND THE GENERAL PUBLIC, TO DETERMINE AND EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG LAND USES, FISH AND WILDLIFE REQUIREMENTS, AND THE MAINTENANCE OF ECOLOGICAL DIVERSITY. THE STUDY AREA INCLUDES A MAJOR PORTION OF THE COASTAL COUNTIES OF PINELLAS, HILLSBOROUGH, MANATEE, AND A SMALL PORTION OF SARASOTA. THERE IS NO ATTEMPT, IN THE DESIGN OR PRODUCTS OF THIS STUDY, TO DEFINE THE LIMITS OF PROPRIETARY JURISDICTION OF ANY FEDERAL, STATE, OR LOCAL GOVERNMENT TO ESTABLISH THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAMS OF GOVERNMENT AGENCIES.

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOURCE MATERIALS INCLUDING MAPS, AERIAL PHOTOS, AND REPORTS. SINCE MANY SOURCES CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND OTHER MAPPED FEATURES, THE USER SHOULD NOT RELY ON THESE MAPS FOR PRECISE MEASUREMENTS OF DISTANCES OR AREAS.

PRIMARY SOURCES OF MAPPED INFORMATION

SALINITY: Conductivity for Tampa Bay water quality sampling stations Sept. 1978 - August 1983. Hillsborough County Environmental Protection Commission.

POINT SOURCE DISCHARGES: Computer printout of industrial and municipal point source discharges in West Central Florida. Florida Dept. of Environmental Regulation, 1983.

DREDGE SPOIL DISPOSAL AREAS: Dredge and Spoil easement location maps. Florida Dept. of Natural Resources.

N.O.S. TIDE STATIONS: Index of tide stations for the state of Florida. National Ocean Service, Rockville, Md. 1981.

WATER QUALITY: Total chlorophyll, conductivity, turbidity, temperature and total nitrogen data for Tampa Bay water quality stations, Sept. 1978 - August 1983. Hillsborough County Environmental Protection Commission.

BATHYMETRIC: Bathymetric map to St. Petersburg Quadrangle, N.O.S. 1978.

INTERTIDAL ZONE: Nautical Chart #'s 11410, 11413, 11414 and 11425. N.O.S., Rockville, Md. 1983.

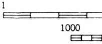
SEDIMENTS: Sediments, oceanographic observations and Floristic data for Tampa Bay, Florida and adjacent waters, 1961-1965, Taylor and Saloman, 1969.

TIDAL CURRENTS: Changes in tidal flow, circulation and flushing caused by dredge and fill in Tampa Bay, Florida. U.S. Geological Survey Open File Report #84-447. Goodwin, 1984.

FRESHWATER-SALTWATER INTERFACE: Position of the Freshwater-Saltwater interface in the upper part of the Floridan aquifer, Southwest Florida, 1979. U.S.G.S. water resources open-file report 82-90. Causseaux and Fretwell, 1982.

FOR COMPLETE REFERENCE SEE MAP NARRATIVE

Selected areas on this U.S.G.S. base map updated using information extracted from aerial photography. This information not field checked.



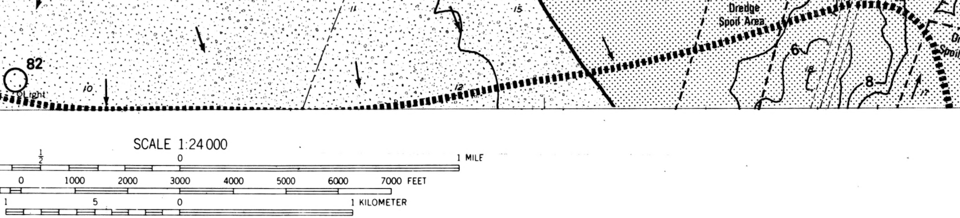
Supplement

Station #33

PARAMETER
Total Chlorophyll (ug/l)
Conductivity (mmhos)
Turbidity (NTU'S)
Temperature (°C)
Total Nitrogen (mg/l)

Station #36

PARAMETER
Total Chlorophyll (ug/l)
Conductivity (mmhos)
Turbidity (NTU'S)
Temperature (°C)
Total Nitrogen (mg/l)



tal Legend (Cont'd)

Lat. 27°49'14" Long. 82°34'15"

SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
27.9	32.8	28.9	18.3	27.0
41600	39863	38317	42400	40550
4.5	3.2	2.8	2.9	3.4
21.8	29.1	24.9	15.3	22.8
0.62	0.73	0.88	0.55	0.69

Lat. 27°51'35" Long. 82°33'13"

SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
27.5	42.0	30.4	27.0	31.7
40833	39664	37900	43200	40399
4.0	4.2	2.9	2.4	3.4
21.7	29.1	24.8	15.5	22.8
0.63	0.71	0.84	0.46	0.66

Station #68 Lat. 27°51'32" Long. 82°35'05"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	26.1	36.8	34.0	19.7	29.2
Conductivity (mmhos)	40533	39813	36833	41267	39612
Turbidity (NTU'S)	4.2	4.7	4.0	2.5	3.8
Temperature (°C)	21.9	29.3	24.9	15.0	22.8
Total Nitrogen (mg/l)	0.71	0.71	0.95	0.67	0.76

Station #82 Lat. 27°45'03" Long. 82°34'20'

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	30.8	33.2	26.8	14.9	26.4
Conductivity (mmhos)	43300	41736	39567	45197	42450
Turbidity (NTU'S)	4.5	5.6	4.0	3.7	4.4
Temperature (°C)	22.8	29.7	25.3	16.5	23.6
Total Nitrogen (mg/l)	0.55	0.70	0.84	0.48	0.64

edge
Area
6
6
14
82°30
27°45'

→ 0.11 - 0.20 ft/sec

→ 0.21 - 0.30 ft/sec

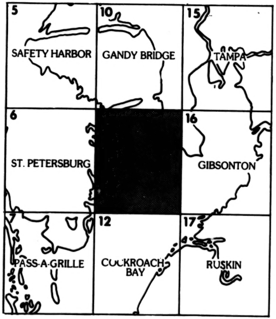
→ 0.31 - 0.50 ft/sec

→ > 0.50 ft/sec

F ▬▬▬▬▬ S **FRESHWATER/SALTWATER INTERFACE**

**(U.S. Geological Survey 1979)
250 mg/l line of equal chloride
concentration in the upper part
of Floridan aquifer.**

**Symbols appearing with numbers are described more fully in the narrative*



Note: Specific conductivity values on the supplemental legend should be in µmhos.

Supplemental Legend for Water Quality Stations on This Map

Station #13 Lat. 27°48'45" Long. 82°31'25"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	27.6	33.3	34.1	18.1	28.3
Conductivity (mmhos)	41250	40702	39100	36073	39281
Turbidity (NTU'S)	3.8	4.1	2.8	2.8	3.4
Temperature (°C)	21.9	29.2	24.9	15.6	22.9
Total Nitrogen (mg/l)	0.77	0.81	0.82	0.58	0.75

Station #14 Lat. 27°46'55" Long. 82°31'25"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	31.5	32.3	24.9	20.2	27.2
Conductivity (mmhos)	43767	42317	39600	43533	42304
Turbidity (NTU'S)	4.6	5.6	2.6	3.3	4.0
Temperature (°C)	22.1	29.2	25.7	16.6	23.4
Total Nitrogen (mg/l)	0.93	0.75	0.95	0.56	0.80

Station #32 Lat. 27°47'34" Long. 82°34'15"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	29.2	32.5	27.5	18.0	26.8
Conductivity (mmhos)	41950	39533	39400	44000	41221
Turbidity (NTU'S)	4.7	4.0	2.8	2.7	3.6
Temperature (°C)	21.8	29.0	24.8	15.5	22.8
Total Nitrogen (mg/l)	0.67	0.79	0.89	0.54	0.72

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BEST AVAILABLE COPY

MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
(ANSI and ISO TEST CHART No. 2)

1.0
4.5
2.8
2.5
5.0
3.2
2.2
5.6
3.6
2.0
6.3
7.1
4.0
1.8
8.0
1.6

1.0
1.1
1.25
1.4
1.6

1.0
1.1
1.25
1.4
1.6